

## WEST Search History





DATE: Thursday, March 18, 2004

Hide?	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
	<i>DB=USPT; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L72	(cordless or wireless) near3 (mouse or pointing device) near5 mode	8
<input type="checkbox"/>	L71	cordless near4 pointing device	20
<input type="checkbox"/>	L70	charg\$ near5 cradle near20 pointing device	0
<input type="checkbox"/>	L69	charg\$ near5 cradle near20 mouse	0
<input type="checkbox"/>	L68	charg\$ near3 cradle near10 mouse	0
<input type="checkbox"/>	L67	charg\$ near3 seat near10 mouse	1
<input type="checkbox"/>	L66	charg\$ near3 seat near10 usb	1
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<input type="checkbox"/>	L64	6084638.pn. and (charg\$ or recharg\$)	0
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<input type="checkbox"/>	L62	mouse near10 usb near10 (radio or if ir infrared)	3
<input type="checkbox"/>	L61	l52 same combin\$	1
<input type="checkbox"/>	L60	combin\$ near3 wire near5 wierless near7 mouse	0
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<input type="checkbox"/>	L58	(cordless near3 mouse).ab.	6
<input type="checkbox"/>	L57	UEDA-HIROTAKA.in.	1
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<input type="checkbox"/>	L44	(cordless near3 mouse) near10 (charg\$ or recharg\$)	1
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<input type="checkbox"/>	L42	cordless near3 mouse same usb	0
<input type="checkbox"/>	L41	cordless near3 mouse near10 usb	0
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<input type="checkbox"/>	L37	wireless near3 mouse	257
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<input type="checkbox"/>	L4	(4625274  5794116  5920306  6304250  6476795)! [pn]	5
<input type="checkbox"/>	L3	(5945981  5983073  6255800  6380714)! [pn]	4
<input type="checkbox"/>	L2	L1 near10 (charg\$ or recharg\$)	5
<input type="checkbox"/>	L1	wireless mouse	162

END OF SEARCH HISTORY

## WEST Search History





DATE: Thursday, March 18, 2004

<u>Hide?</u>	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
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<input type="checkbox"/>	L13	wireless near3 mouse	257
<input type="checkbox"/>	L12	L10 near10 (charg\$ or recharg\$)	0
<input type="checkbox"/>	L11	L10.ti,ab.	6
<input type="checkbox"/>	L10	wireless pointing device	36
	<i>DB=EPAB,JPAB; PLUR=YES; OP=ADJ</i>		
<input type="checkbox"/>	L9	L8 near10 (charg\$ or recharg\$)	8
<input type="checkbox"/>	L8	wireless mouse	74
	<i>DB=USPT; PLUR=YES; OP=ADJ</i>		
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<input type="checkbox"/>	L6	L5 not l2	1
<input type="checkbox"/>	L5	L1 near20 (charg\$ or recharg\$)	6
<input type="checkbox"/>	L4	(4625274  5794116  5920306  6304250  6476795)! [pn]	5
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<input type="checkbox"/>	L2	L1 near10 (charg\$ or recharg\$)	5
<input type="checkbox"/>	L1	wireless mouse	162

END OF SEARCH HISTORY

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L2: Entry 1 of 5

File: USPT

Jan 27, 2004

DOCUMENT-IDENTIFIER: US 6684337 B1

TITLE: Charging system incorporated in computer for charging and resetting wireless peripheral devices

CLAIMS:

8. A charging system incorporated in a computer communicable through a predetermined communication channel with a wireless keyboard device and a wireless mouse device each having a predetermined identification code, the charging system comprising: a charging device mounted to and maintained in electrical connection with the computer, the charging device including at least three first electrical terminals, at least one of the first electrical terminals forming a dedicated reset terminal; and a plurality of rechargeable devices respectively mounted in the wireless keyboard and mouse devices, each of the rechargeable devices including at least three second electrical terminals corresponding to the first electrical terminals; wherein each of the wireless keyboard and mouse devices is attachable to the computer with the corresponding first and second terminals engaging each other to conduct electrical current from the computer to the rechargeable device of the wireless device and to reset and identify the communication channel and the identification code.

signal corresponding to the key signal to the display unit.

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L16: Entry 3 of 15

File: USPT

Jul 1, 2003

DOCUMENT-IDENTIFIER: US 6587053 B1

TITLE: Wireless key input processing apparatus for a display apparatus using a universal serial bus

Abstract Text (1):

A key signal from a wireless keyboard or wireless mouse is received by a display apparatus and is transmitted to a personal computer (PC) through a USB line, and a process signal is received from the PC to control peripheral equipment connected to the display apparatus. The wireless key input processing apparatus includes: a key input unit having an infrared transmitting unit for converting a signal inputted by a user through a wireless keyboard and/or wireless mouse to an infrared signal, and for transmitting it; a display unit for receiving the wireless key signal outputted from the transmitting unit, converting it to USB information, outputting the converted information through the USB line as upstream data; and a PC for identifying the key input corresponding to information from the keyboard and/or mouse as recorded on a ROM BIOS upon receipt of the USB information from the display unit.

Brief Summary Text (5):

If The present invention relates, in general, to a wireless key input processing apparatus for a display apparatus using a universal serial bus (hereinafter, a "USB") and, more particularly, to a wireless key input processing apparatus for a display apparatus using a USB in which a key signal from a wireless key board or wireless mouse is received by a display apparatus, and is transmitted to a personal computer (hereinafter, a "PC") through a USB line, and in which a process signal is received from the PC to control peripheral equipment connected to the display apparatus.

Brief Summary Text (13):

An object of the present invention is to provide a wireless key input processing apparatus for a display apparatus using a USB which is capable of receiving a key signal from a wireless keyboard or wireless mouse operated by a user with the display apparatus.

Brief Summary Text (14):

Another object of the present invention is to provide a wireless key input processing apparatus for a display apparatus using a USB in which a key signal from a wireless keyboard or wireless mouse received by the display apparatus operated by a user is transmitted to a PC through a USB line, and in which peripheral equipment connected to the display apparatus are controlled upon receipt of a process signal from the PC.

Brief Summary Text (15):

In order to attain the above object, there is provided a wireless key input processing apparatus for a display apparatus using a USB, including: a key input unit having an infrared transmitting unit for converting a key signal, inputted by a user through a wireless keyboard and/or a wireless mouse, to an infrared signal, and transmitting it wirelessly; a display unit for receiving the wireless infrared signal outputted from the infrared transmitting unit, converting it to USB information, and outputting the converted USB information through a USB line as

upstream data; and a PC for identifying key input data corresponding to information on a keyboard and mouse as recorded on a read-only memory basic input/output system (ROM BIOS) upon receipt of the USB information from the display unit and, when an accurate signal is inputted, outputting an identifying signal reporting that fact and, at the same time, outputting a corresponding key input process signal to the display unit.

Detailed Description Text (12):

As a unit for displaying an image signal inputted from an external source, a display unit 200 includes: an infrared receiving unit 210 for receiving infrared information outputted from the infrared transmitting unit 110; a USB controller 220 for converting a key signal of the wireless keyboard or the wireless mouse, inputted from the infrared receiving unit 210, to USB information; and a USB hub 230 for outputting, as upstream data, the USB information outputted from the USB controller 220 to a PC 300 through a USB line 250.

Detailed Description Text (26):

As so far described, in the wireless key input processing apparatus of the present invention, when a wireless key signal from the wireless keyboard or wireless mouse is received in the display unit, it is transmitted to the PC 300 through the USB line 250, and then the peripheral equipment connected to the display unit 200 are controlled by the key signal process signal inputted from the PC 300 to the display unit 200. In this way, the data transmitting speed can be highly improved and a large amount of data can be processed for the user's convenience.

CLAIMS:

1. A wireless key input processing apparatus for a display apparatus using a universal serial bus (USB), comprising: a key input unit having an infrared transmitting unit for converting a key signal inputted by a user through at least one of a wireless keyboard and a wireless mouse to an infrared signal, and for transmitting the infrared signal wirelessly as a wireless key signal; a display unit for receiving the wireless key signal transmitted by the infrared transmitting unit, for converting the wireless key signal to USB information, and for outputting the USB information through the USB as upstream data; and a personal computer (PC) for identifying a key input in consideration of information from said at least one of the wireless keyboard and the wireless mouse as recorded in a read-only memory and a basic input/output system (ROM BIOS) upon receipt of the USB information from the display unit; wherein, when an accurate signal is inputted, said PC outputs an identifying signal reporting same and outputs a process signal corresponding to the key signal to the display unit.
3. The apparatus as claimed in claim 2, wherein the PC includes: a root hub for receiving the USB information outputted by the USB hub through the USB, and for outputting the USB information; and a USB host controller for receiving the USB information outputted by the root hub, and for identifying an input key signal of the USB information in consideration of the information from said at least one of the wireless keyboard and the wireless mouse as recorded in the ROM BIOS; wherein, when the accurate key signal is inputted, the USB host controller outputs the identifying signal reporting same, and outputs the process signal corresponding to the key signal so as to transmit the process signal to the USB hub through the root hub as upstream data.
4. The apparatus as claimed in claim 1, wherein the PC includes: a root hub for receiving the USB information from the display unit, and for outputting the USB information; and a USB host controller for receiving the USB information from the root hub, and for identifying the key input in consideration of the information from said at least one of the wireless keyboard and the wireless mouse as recorded in the ROM BIOS; wherein, when the accurate key signal is inputted, the USB host controller outputs the identifying signal reporting same, and outputs the process



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L33: Entry 5 of 14

File: USPT

Jul 8, 2003

DOCUMENT-IDENTIFIER: US 6590563 B1

TITLE: Pointing device having two parts and method of use therefor

Drawing Description Text (15):

FIG. 8 is a perspective view of an embodiment of the present invention wherein a wireless second mouse portion is inserted into a laptop computer that is configured to receive the second mouse portion.

Detailed Description Text (10):

Sidewall 408 shown in FIG. 4a contains a communications port 412. The communications port 412 aligns with a complementary communications port located on the second mouse portion 108 such that when second mouse portion 108 is inserted into first mouse portion 106, a continuous electrical path is formed. The communications port 412 allows the first mouse portion 106 and the second mouse portion 108 to communicate. In a preferred embodiment, the communications port 412 and communications link 104 are preferably coupled to a universal serial bus (USB). However, other standard communication interfaces such as an RS-232 or FireWire (IEEE 1394) may be used and still fall with the scope of the present invention.

Detailed Description Text (16):

FIG. 6d is a bottom view of another embodiment of second mouse portion 108 shown in FIG. 6a. In this embodiment, the sensor 208 is an optical device which monitors movement of the second mouse portion 108. The optical device contains a photo diode system that receives repeated images of the surface on which the mouse rests and extracts from those images movement of second mouse portion 108. The extracted data is communicated to the laptop 100 wirelessly or via communications link 104. In one embodiment, a rechargeable battery 616, used to power electronics enclosed within second mouse portion 108, is provided.

Detailed Description Text (18):

FIG. 8 shows a preferred embodiment of the present invention where the laptop 100 has an opening 801 for receiving second mouse portion 108. The opening 801 contains storage rails 800 and a latch 810 analogous to the rails 400 and latch 410 shown in FIG. 4a. The opening 801 is configured similarly to slot 402. For example, opening 801 contains a male connector type interconnect configured to receive the female connector type interconnect 614 when second mouse portion 108 is inserted. Additionally, the rechargeable battery 616 contained within an embodiment of second mouse portion 108 is rechargeable upon inserting second mouse portion 108 into laptop 100.

Detailed Description Text (19):

FIG. 9 shows a process diagram describing a method for storing the second mouse portion in laptop 100. This process begins by providing a laptop as indicated by reference number 900. Next, a first mouse portion is provided 902 followed by a second mouse portion 904. The second mouse portion and first mouse portion are separated 906. The second mouse portion is then inserted into opening 801 of laptop 100 shown in FIG. 8 by aligning storage rails 800 with groove 610. This step is indicated by reference number 908 in FIG. 9. The second mouse portion is pressed firmly into opening 801 until a clicking sound is heard 910. The clicking sound indicates that the second mouse portion has properly engaged 912 the communications

port located within opening 801. With the communications port properly engaged, battery 616 is recharged.

CLAIMS:

3. The electronic device of claim 1 wherein the second portion includes a rechargeable battery.
4. The electronic device of claim 3 wherein the opening contains circuitry for recharging the battery contained in the second portion.
16. The pointing device of claim 8 wherein the second portion includes a rechargeable battery.
23. The method of claim 21 further comprising the step of charging a battery contained within the second portion.